Location
Austin State Hospital Laboratory, 4110 Guadalupe St., Bldg. 635, Austin, TX 78751

Program Accreditation
The Austin State Hospital Medical Laboratory Science Program is accredited by:

National Accrediting Agency for Clinical Laboratory Sciences (NAACLS)
5600 North River Road, Suite 720
Rosemont, IL 60018-5119
Phone: 847-939-3597
Website: http://www.naacls.org

Non-Discrimination policy
The State of Texas is an Equal Opportunity Employer and does not discriminate on the basis of race, color, national origin, sex, religion, age or disability in employment or the provision of services

Revised: June 27, 2019
This page intentionally left blank
## Contents

Welcome................................................................................................................................. 1
Description of the Medical Laboratory Scientist Profession .............................................. 1
Mission ........................................................................................................................................ 2
Goals .......................................................................................................................................... 2
Essential Functions ............................................................................................................... 3
MLS Program NAACLS Entry Level Competencies ............................................................ 5
Austin State Hospital Medical Laboratory Science Program Competencies .................. 6
Program Schedule ................................................................................................................ 7
Attendance Policy ................................................................................................................. 8
Training ..................................................................................................................................... 12
Board of Certification (BOC) Medical Laboratory Scientist Exam ................................. 17
Advising, Performance Counseling, Grievances and Dismissal from the Program ............. 18
Dress Code (Professional Appearance) ............................................................................... 20
Health and Safety ................................................................................................................. 21
Additional Program Policies .............................................................................................. 22
Program Closure Teach Out Plan ....................................................................................... 26
Textbook List – Updated May 1, 2019 ............................................................................... 27
Course Descriptions ......................................................................................................... 28
Program Officials and Faculty ......................................................................................... 31
Appendix A Signature Page .............................................................................................. 32
Appendix B Honor Code .................................................................................................... 34
This page intentionally left blank
Welcome
Welcome to the Medical Laboratory Science (MLS) Program at Austin State Hospital. The instructional staff wish you success in the pursuit of your educational goals. We are glad to have you and will treat you with courtesy and respect. We are here to assist you in gaining an education both within the classroom and in clinical activities to achieve your goal in becoming a Medical Laboratory Scientist.

Description of the Medical Laboratory Scientist Profession
The Austin State Hospital MLS program provides excellent didactic and clinical experiences to provide students the ability to meet the requirements to practice as a medical laboratory scientist. The following is from our accrediting agency’s publication, the "National Accrediting Agency for Clinical Laboratory Sciences (NAACLS) Standards for Accredited and Approved Programs" (rev 11/2017):

The medical laboratory scientist is qualified by academic and applied science education to provide service and research in clinical laboratory science and related areas in rapidly changing and dynamic healthcare delivery systems. Medical laboratory scientists perform, develop, evaluate, correlate and assure accuracy and validity of laboratory information; direct and supervise clinical laboratory resources and operations; and collaborate in the diagnosis and treatment of patients. The medical laboratory scientist has diverse and multi-level functions in the principles, methodologies and performance of assays; problem-solving; troubleshooting techniques; interpretation and evaluation of clinical procedures and results; statistical approaches to data evaluation; principles and practices of quality assurance/quality improvement; and continuous assessment of laboratory services for all major areas practiced in the contemporary clinical laboratory.

Medical laboratory scientists possess the skills necessary for financial, operations, marketing, and human resource management of the clinical laboratory.

Medical laboratory scientists practice independently and collaboratively, being responsible for their own actions, as defined by the profession. They have the requisite knowledge and skills to educate laboratory professionals, other health care professionals, and others in laboratory practice as well as the public.

The ability to relate to people, a capacity for calm and reasoned judgment and a demonstration of commitment to the patient are
essential qualities. Communications skills extend to consultative interactions with members of the healthcare team, external relations, customer service and patient education.

Medical laboratory scientists demonstrate ethical and moral attitudes and principles that are necessary for gaining and maintaining the confidence of patients, professional associates, and the community.

**Mission**

Austin State Hospital Medical Laboratory Science Program will provide high quality, theoretical and clinical education to equip students with the knowledge, skills and attitudes that are essential for a professional medical laboratory scientist. The program course work and experiences will emphasize the academic, technical, and critical thinking skills necessary to achieve entry-level competency as a Medical Laboratory Scientist. This will provide well qualified graduates for positions in the field.

**Goals**

The goals of the Austin State Hospital MLS Program are as follows:

1. Provide instruction and evaluation based on identified competencies and objectives relevant to the practice in all major areas of medical laboratory science.
2. Provide students with opportunities to develop interpersonal attitudes needed to work independently and professionally with patients and other health care professionals.
3. Assure that entry-level practitioners are adequately prepared to withstand the pressures of the job, including the ability to multitask, maintain stability under pressure, and work accurately and efficiently.
4. Provide students with opportunities to meet specific course objectives and entry-level competencies, both cognitive and psychomotor, in all areas of the clinical laboratory.
5. Prepare medical laboratory science graduates for entry level positions in the workforce.
6. To allow the student to realize that continuing education is necessary for professional growth.
7. Provide students with adequate knowledge and clinical experience to pass a national certification examination appropriate to their level of training.
Essential Functions
The Medical Laboratory Science (MLS) program establishes technical standards and essential functions to ensure that students have the abilities required to participate and potentially be successful in all aspects of the respective programs. Students are required to meet technical standards and essential functions as indicated below. Satisfactory completion of the MLS Program and successful employment following graduation demands your ability to meet the following requirements. If you are uncertain as to your ability with any of these essential functions, please consult with the MLS Program Director.

1. Observational - Ability to participate actively in all demonstrations, laboratory activities and clinical experiences in the professional program component. Such observation and information requires functional use of visual, auditory and somatic sensations.
   a. Observe laboratory demonstrations in which biological (i.e., body fluids, culture materials, tissue sections, and cellular specimens) are tested for their biochemical, hematological, immunological, and histochemical components.
   b. Characterize the color, odor, clarity, and viscosity of biological, reagents, or chemical reaction products.
   c. Employ a clinical grade binocular microscope to discriminate among fine structural and color (hue, shading, and intensity) differences of microscopic specimens.
   d. Read and comprehend text, numbers, and graphs displayed in print and on a video monitor.

2. Movement - Sufficient motor ability to execute the movement and skills required for safe and effective performance of duties.
   a. Move freely and safely about a laboratory.
   b. Reach laboratory bench tops and shelves, patients lying in hospital beds or patients seated in specimen collection furniture.
   c. Travel to numerous clinical laboratory sites for practical experience.
   d. Perform moderately taxing continuous physical work, often requiring prolonged sitting or standing, over several hours.
   e. Maneuver phlebotomy and culture acquisition equipment to safely collect valid laboratory samples.
   f. Possess finger and manual dexterity necessary to control laboratory equipment (i.e. pipettes, inoculating loops, test tubes) and adjust instruments to perform laboratory procedures.
   g. Use a computer keyboard to operate laboratory instruments and to calculate, record, evaluate, and transmit laboratory information.
3. Communication - Ability to communicate effectively in English using verbal, non-verbal and written formats with faculty, other students, clients, families and all members of the healthcare team.
   a. Read and comprehend technical and professional materials (i.e. textbooks, magazine and journal articles, handbooks, and instruction manuals).
   b. Follow verbal and written instructions to correctly and independently perform laboratory test procedures.
   c. Clearly instruct patients prior to specimen collection.
   d. Effectively, confidentially, and sensitively converse with patients regarding laboratory tests.
   e. Communicate with faculty members, fellow students, staff, and other health care professionals verbally and in a recorded format (writing, typing, graphics, or telecommunication).
   f. Transmit information to clients, fellow students, faculty and staff, and members of the healthcare team.
   g. Independently prepare papers, prepare laboratory reports, and take paper, computer, and laboratory practical and course examinations.

4. Intellectual - Ability to collect, interpret and integrate information and make decisions.
   a. Possess intellectual skills: comprehension, measurement, mathematical calculation, reasoning, integration, analysis, comparison, self-expression, and criticism.
   b. Can exercise sufficient judgment to recognize and correct performance deviations.
   c. Apply knowledge to new situations and to problem solving scenarios.

5. Behavioral - Possess the emotional health and stability required for full utilization of the student’s intellectual abilities, the exercise of professional judgment, the prompt completion of all academic and patient care responsibilities and the development of mature, sensitive and effective relationships with faculty, fellow students, clinical instructors, patients and other members of the healthcare team.
   a. Manage heavy academic schedules and deadlines.
   b. Can manage the use of time and be able to systemize actions to complete professional and technical tasks within realistic constraints.
   c. Possess the emotional health necessary to effectively employ intellect and exercise appropriate judgment under conditions of physical and emotional stress.
   d. Can provide professional and technical services while experiencing the stresses of task-related uncertainty (i.e. ambiguous test ordering, ambivalent test interpretation), emergent demands (i.e. "stat" test
orders), and a distracting environment (i.e. high noise levels, crowding, complex visual stimuli).
e. Be flexible and creative, as well as, adapt to professional and technical change.
f. Recognize potentially hazardous materials, equipment, and situations and proceed safely to minimize risk of injury to patients, self, and nearby individuals.
g. Adapt to working with unpleasant biologicals.
h. Support and promote the activities of fellow students and of health care professionals. Promotion of peers helps furnish a team approach to learning, task completion, problem solving, and patient care.
i. Be honest, compassionate, ethical and responsible. Accept responsibility and accountability for one’s own actions. The student must be forthright about errors or uncertainty. The student must be able to critically evaluate his or her own performance, accept constructive criticism, and look for ways to improve performance (i.e. participate in enriched educational activities). The student must be able to evaluate the performance of fellow students and tactfully offer constructive comments.
j. Works within environments of cultural diversity. Works well with men and women and with a variety of ethnic, social, or educational backgrounds.

**MLS Program NAACLS Entry Level Competencies**

The following is from the “National Accrediting Agency for Clinical Laboratory Sciences (NAACLS) Standards for Accredited and Approved Programs” (rev 11/2017):

At entry level, the medical laboratory scientist will possess the entry level competencies necessary to perform the full range of clinical laboratory tests in areas such as Clinical Chemistry, Hematology/Hemostasis, Immunology, Immunohematology/Transfusion medicine, Microbiology, Urine and Body Fluid Analysis and Laboratory Operations, and other emerging diagnostics, and will play a role in the development and evaluation of test systems and interpretive algorithms.

The medical laboratory scientist will have diverse responsibilities in areas of analysis and clinical decision-making, regulatory compliance with applicable regulations, education, and quality assurance/performance improvement wherever laboratory testing is researched, developed or performed.
At entry level, the medical laboratory scientist will have the following basic knowledge and skills in:

1. Application of safety and governmental regulations and standards as applied to clinical laboratory science;
2. Principles and practices of professional conduct and the significance of continuing professional development;
3. Communications sufficient to serve the needs of patients, the public and members of the health care team;
4. Principles and practices of administration and supervision as applied to clinical laboratory science;
5. Educational methodologies and terminology sufficient to train/educate users and providers of laboratory services;
6. Principles and practices of clinical study design, implementation and dissemination of results.

**Austin State Hospital Medical Laboratory Science Program Competencies**

Upon graduation from the Austin State Hospital Medical Laboratory Science Program the student will:

1. Perform routine analyses of laboratory specimens with skill and efficiency, producing accurate and precise results within an acceptable length of time.
2. Operate and maintain laboratory instruments and equipment with care and conscientiousness.
3. Relate the theoretical and practical aspects of each test performed in the laboratory.
4. Demonstrate the ability to organize work in an efficient manner and to assign priority to the performance of tests.
5. Exhibit honesty and integrity in the performance of laboratory testing.
6. Relate normal, abnormal, and critical values with their significance to the patient and their treatment.
7. Demonstrate an attitude of professionalism to patients, patients' families, and other healthcare professionals.
8. Demonstrate safety precautions for all laboratory personnel as derived from hospital and laboratory safety policies.
9. Practice the principles necessary to establish and evaluate quality control procedures.
10. Relate laboratory results to clinical conditions by describing etiology, symptoms, and laboratory results of each condition.
11. Exhibit problem solving capabilities by evaluating test results, troubleshooting instrument malfunctions, and correcting quality control conditions that are out of range.
12. Instruct others in techniques, procedures, and principles of laboratory tests.
13. Demonstrate a basic understanding of management theory, principles, functions, and effective practices.
14. Recognize the roles and responsibilities of other health care professionals as integral members of the health care team.

Program Schedule

Hours
The training period lasts for twelve consecutive months. Students are on duty from 7:00 a.m. to 4:00 p.m. Monday through Friday. Additional adjustments in duty hours may be necessary to take advantage of learning experiences as they are available.

Students are expected to be present in their assigned department in the laboratory Monday through Friday from 7 a.m. to 4 p.m. After hours or weekends are not allowed in the Laboratory. There are occasional outside clinical rotations that require attendance outside of these time frames.

**Daily:** 7:00 a.m. to 4:00 p.m.

**Lunch:** 12:00 p.m. to 1:00 p.m.

**Breaks:** 15 min. a.m. & 15 min. p.m.
(Instructor will inform student of break times)

**Lecture:** 1:00 p.m. to 2:30 p.m.

Holidays
Students will be off on all state holidays that fall on a weekday. On “minor” holidays the laboratory will be open, but students will be off. These holidays will have no lectures. If a student’s outside clinical rotation falls on a “minor” state holiday, they will be required to attend the outside rotation and will accrue “comp time” for the time at the outside rotation. The student will be required to take this “comp time” off within one week of accrual. On “major” state holidays, the laboratory will be closed for students and staff.
## FY2019 Holidays

<table>
<thead>
<tr>
<th>Holiday</th>
<th>Date</th>
<th>Day</th>
<th>Lab Open; Students Off</th>
<th>Lab Closed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Labor Day</td>
<td>September 2</td>
<td>Monday</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Veteran’s Day</td>
<td>November 11</td>
<td>Monday</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Thanksgiving Day</td>
<td>November 28</td>
<td>Thursday</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Day after Thanksgiving</td>
<td>November 29</td>
<td>Friday</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Christmas Eve Day</td>
<td>December 24</td>
<td>Tuesday</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Christmas Day</td>
<td>December 25</td>
<td>Wednesday</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Day after Christmas</td>
<td>December 26</td>
<td>Thursday</td>
<td></td>
<td></td>
</tr>
<tr>
<td>New Year’s Day</td>
<td>January 1</td>
<td>Wednesday</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Confederate Heroes Day</td>
<td>January 19</td>
<td>Sunday</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Martin Luther King Day</td>
<td>January 20</td>
<td>Monday</td>
<td></td>
<td></td>
</tr>
<tr>
<td>President’s Day</td>
<td>February 17</td>
<td>Monday</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Texas Independence</td>
<td>March 2</td>
<td>Monday</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Spring Break</td>
<td>March 16-21</td>
<td>M-F</td>
<td></td>
<td></td>
</tr>
<tr>
<td>San Jacinto Day</td>
<td>April 21</td>
<td>Tuesday</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Memorial Day</td>
<td>May 25</td>
<td>Monday</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Emancipation Day</td>
<td>June 19</td>
<td>Friday</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Independence Day</td>
<td>July 4</td>
<td>Saturday</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LBJ's Birthday</td>
<td>August 27</td>
<td>Thursday</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

## Attendance Policy

### Prescheduled Leave

An absence from work which is requested, and approved by the employee’s supervisor prior to the absence, is considered prescheduled. Approved prescheduled absences are authorized and have no adverse consequences.

### Unscheduled Absence

The use of vacation leave, holiday leave, compensatory leave, emergency leave, or leave without pay which is not prescheduled is considered unscheduled. If an employee cannot report to work as scheduled, he/she will notify the designated department contact person immediately but at least prior to the start of the scheduled shift. Prior communication with the immediate supervisor regarding absences is essential. Unscheduled absences may result in counseling and corrective action by the supervisor and may result in termination.
Pattern Absenteeism
Any repeated, identifiable sequence using unscheduled leave or sick leave is considered pattern absenteeism. A pattern can be, but is not limited to, such practices as periodically taking sick leave or taking unscheduled leave in association with:

- holidays, pay day, or weekends;
- the same days of a week
- the same date a month, or;
- days immediately preceding or following weekends or regularly scheduled days off.

Pattern absenteeism may result in counseling and corrective action by the supervisor and may result in termination.

Sick Leave
Notification Procedures:
Whenever an employee cannot report to work as scheduled, he/she will notify the department contact person prior to the start of the scheduled shift.

Physician’s Statement
Employees are required to bring a physician’s statement when they are ill for more than 3 business days.

Supervisors have the option to require a physician’s statement for absences of 3 days or less if abuse of sick leave is suspected.

The employee may return to work pending receipt of a required physician’s statement; however, if the employee fails to provide the statement within 3 business days, he or she may be subject to corrective action.

Leave Abuse
Abuse of leave will result in corrective action by the supervisor. The following examples are possible indicators of leave abuse:

- the employee demonstrates pattern absenteeism;
- the employee consistently uses sick leave as soon as it is accrued;
- the employee has one or more unscheduled absences in each of 3 or more consecutive weeks/months;
- the employee calls in on days for which vacation or compensatory leave requests were denied;
- the supervisor receives a report of activities or behaviors inconsistent with the sick leave (e.g., attendance at a football game during work hours).
Leave abuse will result in counseling and corrective action by the supervisor and may result in termination.

**No call/no show**

Employees are expected to follow service/department procedures to notify their supervisor of an unscheduled absence. An absence is labeled as a no call/no show (NCNS) when an employee is absent from work and fails to notify their supervisor. The supervisor will attempt to contact the employee who is NCNS. If an employee is NCNS for three consecutive scheduled days, the supervisor will consider a notice of possible disciplinary action against the employee and notify him/her via certified mail. Termination may result. If the NCNS employee is probationary, a probationary termination letter will be mailed via certified mail.

Students will be hospital employees for twelve (12) months and must abide by all hospital policies and procedures.

Regular, punctual attendance demonstrates professionalism, both in the professional workplace setting and in the classroom; attendance is considered a key behavior to a successful learning experience. It is this commitment to learning that will enable the student to progress satisfactorily towards completion of course goals, objectives and demonstrate entry-level competency in all required skills.

The Attendance Policy is designed to set a pattern of professional behavior which mirrors the attendance expectations in the clinical environment. Regular and punctual attendance is required at all lecture and lab/clinical sessions. Tardiness to class is strongly discouraged and will be carefully monitored.

Each student is responsible for making up all class assignments when absent from class.

Students will not be allowed to progress to the next rotation until all competencies from the current rotation are completed satisfactorily.

Consistent failure to notify laboratory staff of unscheduled absences or consistent tardiness will result in disciplinary action.

**Laboratory Protocol for Unscheduled Absence or Tardy**

If you must be tardy or absent due to an illness or emergency, you must follow this protocol:

1. Call the clinical department that you are in and speak with the departmental supervisor or a staff member no earlier than 6:30 a.m. or later than 7:15 a.m.
2. If you are unable to reach someone in your clinical department by 7:15 a.m., call 512-419-2041 and speak to either Jeff Shinn or Karla Snell. **Do not leave a voice message.**

3. Do not text message another student or laboratory staff member that you are sick or tardy.

**Vacation and Sick Time**

During the twelve (12) month training period the student will accrue 8 hours of sick and vacation time each month, but cannot take vacation time for six (6) months.

1. **Sick Time**
   a. Sick time can be used immediately.
   b. Students are not to report to the laboratory if they are ill.
   c. An illness of more than three consecutive days will be counted as one absence and will require a doctor’s note that the student is cleared for attendance.
   d. Abuse of sick time will be carefully monitored.

2. **Vacation time**
   a. Students will use one week (40 hours) of vacation time during Spring Break.
   b. The balance of 56 hours of vacation time can be used after Spring Break but it **must be prescheduled and approved** by the departmental supervisor.
      i. Vacation time must be preapproved by the departmental supervisor.
      ii. The student must fill out a “Request for Leave” form and have it signed by the departmental supervisor.
      iii. Use of vacation or “comp” time **will not be approved** if it falls on a scheduled exam day or a scheduled off-site rotation.
   c. Eight hours of vacation time may be used for job interviews during the summer. Additional vacation time may be used as needed.

3. **Comp Time** - Use of “comp” time must be prescheduled, approved by the supervisor and taken within one week of accrual.

**Insurance Benefits**

Students are eligible for free health insurance through the State of Texas after completing 60 days of service in the program. Dependents or spouses can also be added at the additional state premium rate. Other benefits such as dental insurance, life insurance and disability insurance can be added for an additional premium.
Training

There are two components to the education and training provided during your twelve months:

1. **Departmental Rotations** – students spend one-on-one time in each clinical department within the laboratory. The focus is on skills training. Students will be provided with a notebook containing a list of entry-level competencies which must be completed during this time. Assigned readings, homework, quizzes, exams and/or laboratory practicals are part of the rotation experience.

2. **Lecture series** – the class will come together as a group each afternoon to attend formal course lectures. Each course will have a syllabus which will detail the course and grading requirements. Reading assignments, quizzes and a final examination will be required for each course.

**Departmental Rotations**

Departmental laboratory rotations are scheduled to provide maximum independent study for each student. The student must follow the same professional protocols for conduct as clinical staff. All departmental training is under the direct guidance of the Departmental Supervisor. During clinical rotations students will perform laboratory analyses under the direct supervision of qualified staff.

Each department has a Departmental Notebook which outlines in full the procedures utilized in that department. Students are required to review and become familiar with all procedures they will perform at the bench. Students will be given a list of entry-level competencies which must be completed for each department.

Students are required to remain in the clinical department until noon during each departmental clinical rotation. There are assigned study areas in each department when there is down time. Exceptions to this requirement will be made on an individual basis with departmental approval. Student time schedules (study time vs. bench work) will vary with each department. There is also a Reading List of required outside reading assignments for each department over which the student is given written examinations. Practical examinations will be given in each clinical subject.

**Departmental Laboratory Rotation Schedule** – a schedule will be provided.

<table>
<thead>
<tr>
<th>Department</th>
<th>Weeks</th>
</tr>
</thead>
<tbody>
<tr>
<td>MLS 580 Immunohematology</td>
<td>7</td>
</tr>
<tr>
<td>MLS 480 Immunology/Serology</td>
<td>3</td>
</tr>
<tr>
<td>MLS 980 Clinical Chemistry</td>
<td>13</td>
</tr>
<tr>
<td>Department</td>
<td>Weeks</td>
</tr>
<tr>
<td>------------------------------------------------</td>
<td>-------</td>
</tr>
<tr>
<td>MLS 680 Hematology/Coagulation</td>
<td>11</td>
</tr>
<tr>
<td>MLS 880 Clinical Microbiology</td>
<td>12</td>
</tr>
<tr>
<td>MLS 280 Urinalysis/Body Fluids</td>
<td>3</td>
</tr>
</tbody>
</table>

Departmental Rotations - Off-Site
To supplement those areas which our laboratory does not provide practical experience and/or to give students additional experiences on different types of instruments, each student will be assigned to the following clinical sites:

1. **Clinical Pathology Labs (CPL)**
   - Address: 9200 Wall St., Austin, TX
   - Departments: Molecular, Chemistry, Accessioning, Microbiology

2. **Dell Seton Medical Center at The University of Texas (DSMC)**
   - Address: 1500 Red River St., Austin, TX
   - Departments: Immunohematology, Serology, Hematology, Chemistry, Microbiology

3. **Department of State Health Services - Laboratory Services (DSHS)**
   - Address: 1100 W. 49th St., Austin, TX
   - Departments: Serology, Hematology, Microbiology, Parasitology, Virology, Molecular

4. **We are Blood**
   - Address: 4300 N. Lamar, Austin, TX
   - Departments: Immunohematology

Outside rotations will be scheduled by the Departmental Supervisor near the end of Departmental rotation period. **Students are not allowed to use vacation time during off-site clinical rotations.**

Students are expected to follow the policies, procedures, and conduct of the clinical site they are attending at all times.

Additional rotations may be added as they become available.

**Lecture Series**
Students will attend formal lectures over each discipline. The lectures are given by Medical Laboratory Scientists and provide principles and theories as they apply to each major area in the clinical laboratory. A tentative schedule will be provided. There are times that the schedule changes due to departmental challenges.
Cell phones must be turned off and kept out of sight during the lecture. Failure to turn off cell phones may result in phones being kept in the student’s locker.

Lectures are typically held from 1:00 to 2:30 p.m. Monday through Friday in the student lecture room.

Canvas
Instructors are moving all lecture materials (PowerPoints, Quizzes, assignments, etc.) to the online course delivery system, Canvas. The program director will add you to each course as the year progresses.

It is the student’s responsibility to meet the course requirements by frequent visits to the course portal.

Examination Format
Written Examinations (quizzes or finals) are scheduled periodically during each formal lecture series and each departmental rotation. The scheduled dates are to be followed except in rare cases when a legitimate conflict arises. The instructor will inform the students of the time for taking quizzes, exams and finals. Exams may be written or online through Canvas. All written exams will be taken in the testing area located in the administrative area of the laboratory.

Examination format may be either objective or subjective. Examinations and quizzes may contain multiple choice, matching and short answer questions.

Examinations will be designed to test the following taxonomy levels of material covered in the stated objectives:

- **Level 1. Recall – Knowledge and Comprehension** - Recall are at the basic taxonomic level and involve recall or description of information.
- **Level 2. Interpretation – Application and Analysis** - Interpretation is a higher level of learning and involves application and examination of knowledge.
- **Level 3. Problem-Solving – Synthesis and Evaluation** - Problem-solving skills test the highest level of learning and involve construction and assessment of knowledge.

Examinations are criterion referenced - the passing score is predetermined. Students are asked to keep examination material confidential – **Exams are not to be shared with other students. This is considered academic dishonesty and is grounds for immediate dismissal from the program.**
Examination Guidelines

1. Departmental Examinations must be taken at a time agreeable to department supervisor or instructor.
2. All examinations must be completed before leaving the department.
3. Written examinations must be taken in the Student Classroom or the office library. Exams in Canvas will be taken at an assigned computer.
4. All study materials are to be left in the laboratory during examinations.
5. After beginning the exam, do not leave the room prior to completion. Exception may be use of the restroom.
6. Upon completion of the examination, immediately return to the laboratory and hand in your exam. Discussion among students about the exam should not occur until all students have completed exam.
7. The instructor will assign a completion time for the exams.
8. If the student feels the answer to an exam question is incorrect, the student must submit a written rebuttal to the instructor with supporting references that are part of assigned curriculum.
9. Special considerations for exams taken in Canvas:
   a. Under no circumstances are students allowed to go to any website during an examination. The history log of the computer will be checked upon completion of the exam.
   b. No study materials or electronic devices, including cell phones, are allowed when taking an exam in Canvas.
   c. Under no circumstances will students be allowed to print out the exams. The instructor will make exams available for review on a limited time basis.
   d. Printing of exams will be considered an act of academic dishonesty and may result in dismissal from the program.
10. In summary, examinations are designed to evaluate all aspects of the students’ progress and development MLS skills and practice: knowledge and comprehension, professionalism and integrity.

Grading Policy

1. Lecture – the grading rubric will vary by course and will be included in the course syllabus. A grade of 75 or above is required to successfully pass the course.
2. Clinical Laboratory Practical work – students will complete the clinical competencies at an acceptable level of performance in accordance with departmental objectives in terms of parameters such as: accuracy, precision, ability to organize work, manual dexterity, initiative, etc. influences the grade in each department.
3. Departmental Clinical Rotation (Laboratory) Grade by Department - The calculation of the clinical laboratory grade varies with each individual
clinical department based on the number of exams, practical’s, and the final exam. The grading rubric will be provided in the course syllabus.

4. **Clinical Lecture Grade by Department** - The didactic lecture exam average determines the lecture grade. The grading rubric will be provided in the course syllabus.

5. **Clinical Competency by Department** - The student must achieve entry level competency for each skill listed during the clinical rotation. Clinical competencies are “pass/fail” and must be successfully completed to pass the clinical rotation.

6. **A grade of 75 or above is required for each course.** Inability of the student to obtain a grade of 75 will require the student to repeat the department or a portion thereof at his own expense at the end of the scheduled training year. Failure in more than one department subjects a student to suspension from training. No student shall be certified to be eligible for the board of certification examination until all departments have been satisfactorily completed. If a student fails one department (average below 75%) the student will be placed on academic probation; subsequent failure of any test will subject student to academic dismissal.

7. **Students are required to obtain a passing score on laboratory practical exams.** Failure to do so will necessitate retaking of the practical and the appropriate portion of the department rotation must be repeated. Failure to pass practical after second attempt will necessitate reevaluation of student's status for completion of program.

8. **The grade scale is as follows:**

<table>
<thead>
<tr>
<th>Grade</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>90-100</td>
</tr>
<tr>
<td>B</td>
<td>80-89</td>
</tr>
<tr>
<td>C</td>
<td>75-79</td>
</tr>
<tr>
<td>Fail</td>
<td>Below 75</td>
</tr>
</tbody>
</table>

**Clinical Evaluations**

Students will be evaluated on their performance in each clinical department by the Departmental Supervisor. These evaluations will include grades as previously noted, and factors considered important to the overall evaluation of the student as a potential practicing Medical Laboratory Scientist - attitude, cooperation, honesty, stability of emotions, leadership, ability to work with people, etc. Hospital evaluations occur at 6 months and 12 months. Clinical rotation evaluations occur at the end of each clinical rotation.

**Exit Exam**

An Exit Exam is given upon completion of training. The exam is a two and a half hour, objective test in similar format to the Board of Certification Examination. The
student must obtain a passing score to be eligible for graduation. Students will be given up to 3 opportunities to achieve a passing score.

Miscellaneous Educational Opportunities

- **In-service Education**: These programs are held during the lunch hour once a month. The scientific program is held at approximately 12:30 to 1:00 p.m. Attendance is mandatory.
- **Other educational activities**: Clinical Pathology Laboratory (CPL) Pathologist in-service. Attendance is mandatory.

Special Seminars

The objective of these seminars is to present material which supplements the basic didactic lecture schedule: anatomy, pathophysiology, clinical care studies, and recent journal articles. Presenters include Dr. Pacinda, guest physicians and supervisory technologists. Date, time and location to be announced. Attendance is mandatory.

Supplemental Training Aids

On-line training modules with assessment for each area of the clinical laboratory are required as supplemental curriculum. Sets of study slides, CD-ROMs and DVDs on various subjects are available for student use. Workbooks are also available in each department for self-study.

American Society for Clinical Pathology (ASCP) Student Membership

Students are required to join ASCP. **Student membership is free!** Students will be reminded to renew their membership prior to graduation to receive an additional free year.

Board of Certification (BOC) Medical Laboratory Scientist Exam

**Overview**

Upon completion of the program, students are eligible to sit for the ASCP BOC Medical Laboratory Scientist national certification examination by Route 1. The program will provide information about the application procedure. **NOTE:** If special accommodations due to a disability are required the student must follow the instructions provided in the Procedures for Examination & Certification on the ASCP website (ascp.org).

**Display of Certificates on Social Media**

**Do not display your ASCP Board of Certification certificates on social media.** Images of certificates can be used by unscrupulous individuals to copy the certificate and change the name to their own. This copy is then used to obtain employment. To maintain the value of ASCP BOC certification and, most
importantly, for patient safety and welfare, it is important for individuals to protect their certificates from misuse.

**Passing Certification Exam Not Required for Awarding Degree or Certificate**

Issuance of a degree or certificate is not contingent upon the student passing the certification exam.

**Advising, Performance Counseling, Grievances and Dismissal from the Program**

**Advising**

Students are encouraged to meet with the laboratory manager or program director when issues arise which interfere with the students’ progress in the program. Students are eligible to seek assistance for problems unrelated to the program through the agency Employee Assistance Program (EAP).

The program assures that appropriate confidentiality and impartiality will be maintained for any meetings which occur with the student and ASH staff members.

**Performance Counseling Sessions**

Performance counseling sessions will be held as indicated in situations such as: consistently failing grades on exams, student's failure to meet and keep up with departmental clinical practical requirements in terms of procedures learned and acceptably performed, etc. The performance session will involve the student, the clinical supervisor, and the Program Director. The student may be placed on probation and, if the terms of probation are not met, dismissed from the program. All records of performance sessions will be kept confidential.

**Student Grievances**

The following process is used for arbitrating student grievances pertaining to the Medical Laboratory Science Program:

1. When a problem arises, the student must seek a solution at the earliest possible time. Don't let an uncomfortable situation build. Take the initiative.
2. If the student feels comfortable in discussing the problem directly with the person involved, do so. Frequently this sort of discussion can be more comfortable for both parties involved if a third person is present. That third person can be any of the following individuals:
   a. Department Supervisor
   b. Laboratory Manager
   c. Program Director
3. If the student is not comfortable with such a discussion involving the principals or wants advice about appropriate action to follow, a student
ombudsman may be elected by the class. The ombudsman may be either a fellow student or a staff member with whom the class feels comfortable in communicating.

4. Academic Grievance Appeal Process
   a. If after pursuing the resolution of an academic grievance the student is not satisfied then they can appeal their case to the grievance committee.
   b. The grievance committee will be composed of the department supervisor, faculty member (if different than the supervisor), laboratory manager, MLS program director and neutral third party, preferably an individual from HR.
   c. The grievance committee will hear the student’s case, review the appropriate materials and make a decision within one week of the meeting.
   d. The student will be notified in writing of the decision.
   e. All decisions made by the committee are final.

5. Non-Academic Grievances
   a. Since students are temporary employees of the State of Texas, no grievance privileges are available regarding specific hospital related policies and procedures.
   b. These are outlined in the ASH Regulations Manual which is available to you in the Laboratory Office.

**Causes for Dismissal from the MLS Program**

1. Failure to complete prerequisite requirements.
2. Failure to obtain a passing course grade.
3. Failure of a practical exam on the second attempt.
4. Unethical, immoral, or illegal conduct (including, but not limited to, dishonesty, theft, intoxication, or possession or use of narcotics during student hours).
5. Violations of MLS program or hospital policies especially those related to patient privacy and protected health information (HIPPA).
6. Unexcused or extended absences for reasons other than illness or emergencies.
7. Consistently unsatisfactory evaluations. This would include behavioral characteristics which reflect poor growth potential and/or evidence of low motivation.
8. Failure to rectify a situation which has provoked a warning from the MLS Program Director.
9. Disorderly conduct, including the use of profane or abusive language to either employees, patients, visitors or others within the hospital.
10. Intentionally falsifying, omitting, or altering information contained in the program application and related materials for admission to the program.
11. Violation of the school honor code including the use of cheat sheets, sharing information about exams or practicals, copying exams or using any reference material while taking an exam.

Decisions regarding probation and/or dismissal from the hospital program will be made by a committee consisting of the MLS program faculty.

Appeals regarding probation or disciplinary action may be made in writing to the Medical Director. The Medical Director will meet with you and reply within five working days or within five working days after returning from leave.

Dress Code (Professional Appearance)
The Laboratory staff and students are expected to maintain a professional appearance and attitude at all times. This guideline for appropriate attire follows both professional and safety considerations:

1. **Hygiene**: Students must bathe regularly to avoid offensive odor. Conservatively applied makeup is permitted.
2. **Fragrances**: Do not use perfume, body spray, and cologne or aftershave lotion. Some patients may have allergies to fragrances or the odor may make patients nauseous.
3. **Clothing**:
   a. Scrubs **are required** and are **mandatory for off-site rotations**.
   b. Scrubs must be clean and well fitting (not extremely tight in appearance).
   c. Protective lab coats will be provided by the hospital. These are to be worn when working in the laboratory departments. Lab coats must be removed when going on breaks or to lunch.
4. **Shoes**: Must be closed-toed and soft-soled, non-marking. Tennis or similar shoes are strongly recommended. The following types of shoes are **not** allowed: porous mesh material, clogs, crocs or other types of shoes with no back or holes in the top are not allowed.
5. **Body piercing/Tattoos**: Only pierced ears allowed. Dangling earrings, nose, eyebrow or other body piercing are not acceptable. There is the possibility of patient forcibly removing jewelry and injuring employee. Tattoos will be covered at all times in the off-site clinical rotations.
6. **Identification Badge** is required and must be worn at all times above the waist, preferably on a lanyard.
7. **Hair**: Must be clean, neat and of a normal hair color. If the hair’s length is at or below the shoulder, or if it has tendency to hang in the face, it must be drawn back; such as in a clip or band. Loose or drawn back hair that has the tendency to fall into the workspace must be secured with additional clips or bands.
8. **Jewelry**: Jewelry should be limited to wedding rings and a wrist watch. A conservative necklace that is kept close to the skin (not dangling) and conservative earlobe earrings (no more than one pair) that do not extend more than $\frac{1}{2}$ inch below the earlobe are acceptable.

**Health and Safety**

**Immunization Requirements**

Students must meet the immunization requirements of the clinical facilities they will be attending. Each student must complete the program Immunization Form which provides proof of the following:

1. Current Hepatitis B vaccination or proof that these vaccinations were made available and rejected by the student.
2. Tuberculosis (TB)
   a. PPD within three months prior to student’s on-site placement or
   b. Chest x-ray within 2 years immediately prior to student’s on-site placement if such student has ever tested positive for TB.
3. Measles vaccination for two dates, which must be after January 1, 1968, or positive titer.
4. Mumps vaccination for one date, which must be after January 1, 1977, or a positive titer.
5. Rubella vaccine or positive titer.
6. Varicella (chicken pox) vaccination, titer or medical history (doctor documentation) of this disease.

**Health Insurance**

Students will be provided with health insurance as part of the benefits offered through the program.

**Laboratory Safety**

Students must adhere to all safety standards and procedures. Safety training will be provided at the beginning of the program. Initial training will require students to complete designated modules in MedTraining.

Each student is responsible for becoming knowledgeable regarding the expectations and policies of the MLS Program and the Clinical Affiliate where the student is placed.

1. Since medical history and examination cannot reliably identify all patients infected with bloodborne or other transmissible pathogens, Blood and Body Fluid Standard Precautions are to be adhered to at all times.
2. All health care workers must routinely use appropriate barrier precautions to prevent skin and mucous membrane exposure when contact with any blood or body fluids may be anticipated.
3. Gloves must be worn when handling specimens and items or surfaces soiled with blood or body fluids, when performing specimen collection procedures, or any time when exposure may occur.

4. Hands must be washed immediately after gloves are removed and prior to leaving the laboratory. Hands and other skin surfaces must be washed immediately and thoroughly if contaminated with blood or other body fluids.

5. All health care workers must take precautions to prevent injury caused by needles and other instruments or devices during procedures. Appropriate engineering controls, personal protective equipment, and safe work practices should be used at all times. To prevent needle stick injuries, needles should not be recapped, purposely bent or broken, removed from syringes, or otherwise manipulated by hand. Needle safety devices should be engaged as soon as possible.

6. Laboratory work involves dealing with chemical reagents and other hazardous materials. For this reason, all personnel, including students, are required to wear face protection and gloves while working in designated areas of the laboratory.

**Accident Protocol**

If a student has an accident or blood or body fluid exposure during the performance of their duties as an MLS student, they must report the incident immediately to their supervisor. The student will follow the protocol proscribed for any employee related injury.

**Liability Insurance**

Each student is required to purchase liability insurance which meets the requirements of the hospital and clinical affiliates. Proof of insurance must be provided to the Program Director. Students will be provided with information for the provider utilized by the ASH MLS program.

**Additional Program Policies**

**Email**

Students will be assigned an HHSC email address. Students are required to check their email accounts at least once a week if not more often.

**Alcohol and Substance Abuse Testing Program**

Pre-employment alcohol and substance abuse testing is required by the Austin State Hospital. Based on reasonable suspicion, the Hospital may require employees suspected of using or abusing a controlled substance or misusing alcohol to take an alcohol/or controlled substance test. An employee found to have engaged in prohibited behavior will be required to be evaluated by a substance abuse
professional. A positive confirmatory test may result in disciplinary action up to and including termination from employment.

**Service Work Policy**
Medical Laboratory Science students are not allowed to take the place of qualified staff during any clinical rotation. After demonstrating proficiency students may, with qualified supervision, be permitted to perform procedures. **Students are not allowed to perform service work at Austin State Hospital.** If the student is employed at a clinical facility the work must be performed outside academic hours and be noncompulsory.

**Patient Information and Results**
The Health Insurance Portability and Accountability Act (HIPAA) requires that all patient information and results must be kept confidential and may be reported only to those professionals directly involved with the patient's treatment and care. Failure to comply may result in probation or immediate dismissal from the program depending upon the level of the violation.

**Social Media and Portable Electronic Devices**
Social media platforms are technology tools and online spaces for integrating and sharing user-generated content in order to engage constituencies in conversations and allow them to participate in content and community creation. Examples include but are not limited to:

- Blogs: Wordpress, Blogger
- Social Networking Sites: Facebook, Twitter, LinkedIn
- Virtual Social Worlds: Second Life
- Collaborative Projects: Wikis
- Content Communities: YouTube, Flickr

**What are Portable Electronic Devices (PED)?**
Any non-stationary electronic apparatus with singular or multiple capabilities of recording, storing, processing, and/or transmitting data, video/photo images, and/or voice emanations. This definition generally includes, but is not limited to, laptops, PDAs, pocket PCs, palmtops, Media Players (MP3s), memory sticks (thumb drives), cellular telephones, PEDs with cellular phone capability, and pagers.

**Publishing Information to Social Media**
When publishing information on social media sites, the student needs to be aware that information may be public for anyone to see and can be traced back to them as an individual. There is no such thing as a “private” social media site. Search engines can turn up posts years after the publication date. Comments can be forwarded or copied. If you are unsure about posting something or responding to a comment, ask your faculty.
with the audience therefore an individual has less control of how materials will be used by others. Social media may be used to investigate student behavior.

As a student in an MLS program, you may encounter confidential information within the classroom or clinical laboratory during rotations. It is the responsibility of the student to follow the following policy related to Social Media.

**Social Media Policy**

All postings to social media platforms must comply with the Health Insurance Portability and Accountability Act of 1996 (HIPAA), applicable facility policy, and state law. Do not share, post, or otherwise disseminate any information, including images, about a patient or information gained as a result of your presence in the clinical laboratory setting or as a result of a student-patient/client relationship.

Do not identify patients/clients by name or post or publish information that may lead to the identification of a patient/client (examples include but not limited to: date of care, facility name, diagnosis, and treatment/surgery). Limiting access to postings through privacy settings is not sufficient to ensure privacy.

During clinical rotations, any use of electronic devices (cell phones, laptops, etc.) must be with faculty approval within the guidelines of facility/program policies.

Do not take photos or videos of patients on personal devices, including cell phones.

Maintain professional boundaries in the use of electronic media. Online contact with patients/clients or former patients/clients blurs the distinction between a professional and personal relationship.

Student must have permission from the faculty to videotape or audio tape in the classroom. Official accommodations made by the Student Accessibility Services (SAS) will be provided.

Personal phone conversations or texting are NOT allowed at any time while in patient/client areas or in the classroom. If the student needs to respond to an emergency text or call during class, the student is asked to leave the classroom.

**Cell Phone Use**

Employees may not use privately owned cell phones while on duty in patient clinical areas or in the presence of patients. Personal cell phones cannot be used to photograph or text any protected health information (PHI). A PHI breach or HIPAA violation may result in disciplinary action.
Laboratory employees may use personal cell phones on breaks, during lunch, or in personal emergencies. Personal cell phone use must occur outside the departmental testing areas and in “clean” areas of the laboratory.

**Consequences**
Violations of patient/client privacy with a portable electronic device/use of social media platforms will be subject to HIPAA procedure/guidelines and consequences.

Students who violate HIPAA through the use of social media platforms/portable electronic communication devices do so at the risk of disciplinary action that can be failure in a course and/or dismissal from the program.

**Hospital Issued Keys**
Each student will be issued keys to the laboratory entrance. As a hospital employee you are always responsible for maintaining possession of the keys. If the keys are lost the student will be responsible for paying a $10.00 lost key fee.

If the key is lost and falls into the possession of a patient the student will be disciplined and, depending upon the outcome of the patient situation, may be immediately dismissed from the program.

**Release of records**
The student will be asked to sign a statement giving Austin State Hospital permission to release information to future employers. This is voluntary.

**Withdrawal Policy**
If a student voluntarily withdraws from the Medical Laboratory Science program or is dismissed due to academic failure, he/she shall follow the employee termination process as outlined by the DSHS. This includes:

- a written declaration of resignation,
- return of ID badge and keys, and
- completion of applicable paperwork.

**Tuition and Refund Policy**
A nominal tuition of $300 per student is charged at the beginning of the academic year to cover administrative costs. If a student withdraws from the program, the tuition will be refunded at a prorated rate until six months into the program. After six months, no tuition refund will be given.

The cost of textbooks and liability insurance are not eligible for a refund after purchase.
Program Closure Teach Out Plan

NAACLS requires the MLS program to have a “teach out” plan in case the program unexpectedly closes due to natural and unnatural disasters or permanent closure. Intentional closure of the MLS program will be communicated to all students immediately.

Prospective students:

- In the case of permanent closure students will be informed that the program will not take a new cohort due to program closure.
- In the case of a natural or unnatural disaster the program will work with other state laboratories to continue education and training until training can resume at the hospital laboratory.
- Students will be counseled in applying to other local MLS programs.
- Program closure information will be posted on the ASH website.

Current students:

- Students will be informed of program closure.
- In the case of a natural or unnatural disaster the program will work with other state laboratories to continue education and training until training can resume at the hospital laboratory.
- In the event of a permanent closure current students will be allowed to complete MLS coursework.
- The Program Director will be designated to clear students applying for the certification exam.

In case of disaster the Austin State Hospital will inform students of a plan for continuation of their education as soon as that information is available.
Each student is required to purchase the following books. No exceptions. Students must purchase the textbooks prior to the first day of class and/or clinical assignment.

<table>
<thead>
<tr>
<th>Course</th>
<th>Author, Title and Edition</th>
<th>Year</th>
<th>Publisher</th>
<th>ISBN</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clinical Chemistry</td>
<td>Burtis, C. and Bruns, D, Tietz Fundamentals of Clinical Chemistry and Molecular Diagnostics, 7th edition.</td>
<td>2015</td>
<td>Elsevier</td>
<td>9781455741656</td>
<td>$122.00</td>
</tr>
<tr>
<td>Hematology/Coagulation</td>
<td>Deohane, E., Rodak’s Hematology, 5th edition.</td>
<td>2016</td>
<td>Elsevier</td>
<td>9780323239066</td>
<td>$132.00</td>
</tr>
<tr>
<td></td>
<td>Rodak, B, Clinical Hematology Atlas, 5th edition.</td>
<td>2017</td>
<td>Elsevier</td>
<td>9780323322492</td>
<td>$73.95</td>
</tr>
<tr>
<td>Urinalysis/Body Fluids</td>
<td>Strasinger S., Urinalysis and Body Fluids, 6th edition.</td>
<td>2014</td>
<td>F. A. Davis</td>
<td>9780803639201</td>
<td>$72.95</td>
</tr>
<tr>
<td>Immunology/Serology</td>
<td>Turgeon, M., Immunology and Serology in Laboratory Medicine, 6th edition.</td>
<td>2018</td>
<td>Elsevier</td>
<td>9780323431477</td>
<td>$82.95</td>
</tr>
<tr>
<td>ALL</td>
<td>BOC Study Guide, 6th edition.</td>
<td>2018</td>
<td>ASCP</td>
<td>9780891896609</td>
<td>$69.00</td>
</tr>
</tbody>
</table>
Course Descriptions

MLS 080L INTRODUCTORY LECTURES: Information presentation (23 hours) giving brief overview of program policies, student notebook, laboratory safety, laboratory information system, ethics, professionalism, and quality assurance. Introductory lectures given in Phlebotomy, Chemistry, Hematology, Microbiology, Serology and Immunohematology.

MLS 980 CLINICAL CHEMISTRY LABORATORY: A 13-week (520 hours) course on practical aspects of clinical chemistry including manual and automated procedures. Emphasis is placed on the pre-analytical, analytical and post-analytical components of clinical chemistry. This includes principles and methodologies, performance of assays, problem-solving, trouble shooting, techniques, interpretation of clinical procedures and results, statistical approaches to data evaluation and principles of quality control and quality assurance. Rotations to University Medical Center at Brackenridge and Clinical Pathology Laboratory provide additional experiences with instrumentation and specialized procedures.

MLS 980L CLINICAL CHEMISTRY LECTURE: (142.5 hours). Introduces the principles and procedures of various tests performed in clinical chemistry. Presents the physiological basis for the test, the principle and procedures for the test, and the clinical significance of the test results, including quality control and normal values. Also includes basic chemical laboratory techniques, chemical laboratory safety, electrolytes and acid-base balance, proteins, carbohydrates, lipids, enzymes, metabolites, endocrine function, and toxicology.

MLS 880 CLINICAL MICROBIOLOGY LABORATORY: An intensive 12-week (390 hours) course in the processing of clinical specimens submitted for microbiological evaluation. Pre-analytical, analytical and post-analytical to include isolation and identification methodologies for disease producing microorganisms, antimicrobial susceptibility testing, hospital environmental surveillance and infection control as well as clinical mycology and parasitology techniques.

MLS 880L CLINICAL MICROBIOLOGY LECTURE: (60 hours) This course will introduce students to the microbial species that cause human disease. We will cover bacteria, fungi, viruses, and protozoa, and discuss current topics including antibiotic resistance, public health threats, and global health. Instruction in the theory, practical application, and pathogenesis of clinical microbiology, including collection, quality control, quality assurance, safety, setup, identification, susceptibility testing, and reporting results.
**MLS 680  HEMATOLOGY AND COAGULATION LABORATORY:** An 11-week (357 hours) course on the practical aspects of clinical hematology and coagulation with emphasis on principles, methodology, quality control, instrumentation, specimen procurement, problems, and clinical evaluation. Focus is placed on pre-analytical, analytical and post-analytical element of clinical hematology. This is accomplished by problem solving, trouble shooting, cognitive skills and interpretation of clinical results, and quality control. Outside rotations to Texas Department of State Health Services and Dell Seton Medical Center provide the student with additional experience in instrumentation and procedures such as bone marrow and hemoglobin electrophoresis.

**MLS 680L  HEMATOLOGY AND COAGULATION LECTURE** (82.5 hours) Lectures and discussions of theoretical and clinical applications of the hematologic and coagulation disorders. Presents the foundation for the formation of blood cells, identification of normal and abnormal blood cells as they correlate to disease, and hematologic principles of diagnostic test procedures. Also included is the study of coagulation, the clotting and fibrinolytic mechanisms of the blood and principles of diagnostic test procedures. Emphasis is placed on the clinical significance of laboratory results obtained as they relate to diagnosing hematologic and coagulopathy blood diseases and disorders. Special emphasis is placed on case study presentations using audio-visual aids and the use of critical pathways and clinical decision making.

**MLS 580  IMMUNOHEMATOLOGY LABORATORY:** A 7-week (230 hours) course on practical immunohematology with emphasis on pre-analytical, analytical, and post-analytical to include ABO typing, antibody detection and identification, compatibility testing, diagnosis and work up of hemolytic disease of the fetus and newborn, transfusion reactions and component therapy in the transfusion service. Case studies in all aspects of transfusion medicine included.

**MLS 580L  IMMUNOHEMATOLOGY LECTURE:** (26 contact hours) Lecture topics to be covered include: donor screening; preparation of components; component therapy; antigens/antibodies of the ABO, Rh and other blood group systems; pre-transfusion testing procedures; compatibility testing; hemolytic disease of the fetus and newborn; neonatal and obstetrical transfusion practice; autoimmune hemolytic anemias; and adverse effects of transfusion.

**MLS 480  IMMUNOLOGY/SEROLOGY LABORATORY:** A 3-week (98 hours) course on practical Serology detailing pre-analytical, analytical, and post analytical to include principles, methodology, and interpretation of serologic assays. Emphasis on molecular, automated and manual techniques. Representative case studies will be presented utilizing critical pathways and clinical decision making.

**MLS 480L  IMMUNOLOGY/SEROLOGY LECTURE:** (15 contact hours) Students will review the function of the innate and acquired immune systems. Students will conduct a comprehensive study of immunodeficiency disorders, autoimmune disorders and hypersensitivity reactions. Students will also become familiar with various serologic, immunological and molecular testing methodologies used in the clinical laboratory.
MLS 280  **URINALYSIS AND BODY FLUIDS LABORATORY:** A three week (120 hours) course using pre-analytical, analytical, and post-analytical processing of urine and other body fluids submitted for evaluation. Emphasis is placed on specimen identification, processing of routine urinalysis, microscopic examinations, and special urine chemistries.

MLS 280L **URINALYSIS AND BODY FLUIDS LECTURE:** (22.5 hours). An introduction to the study of urine and body fluid analysis. Includes renal anatomy, physiology and pathology, characteristic clinical and laboratory findings in common renal disease, and the role of dialysis and transplantation in renal failure. Representative case studies will be presented utilizing critical pathways and clinical decision making.

MLS 081L **LABORATORY MANAGEMENT:** Lecture and case studies (15 hours) covering principles of management to include the principles and practice of quality assurance/ quality improvement as applied to the pre-analytical, analytical, and post-analytical components of laboratory science. Application of safety and governmental regulations and standards as applied to laboratory practices. Principles of interpersonal and interdisciplinary communication and team building skills. Education techniques and terminology, human resource management and financial management.

MLS 090  **SEMINAR:** Informal lecture/discussion designed to supplement the basic didactic lecture schedule with emphasis on critical pathways, clinical case studies, recent journal articles, principles of interpersonal and interdisciplinary communication and team building skills.

**Note:** Students from an affiliated University will receive 30 semester credit hours upon completion of the Medical Laboratory Scientist program.
## Program Officials and Faculty

<table>
<thead>
<tr>
<th>Name and Position</th>
<th>Contact Information</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1. Terry Kotrla, MS, MT(ASCP)BB</strong>&lt;br&gt;Program Director</td>
<td>Email: <a href="mailto:terry.kotrla@hhsc.state.tx.us">terry.kotrla@hhsc.state.tx.us</a>&lt;br&gt;Phone: 512-560-5361</td>
</tr>
<tr>
<td><strong>2. Jeffrey Shinn, BS, MT (ASCP)</strong>&lt;br&gt;Laboratory Manager/Education Coordinator&lt;br&gt;Lecture: Laboratory Management</td>
<td>Email: <a href="mailto:Jeffrey.shinn@hhsc.state.tx.us">Jeffrey.shinn@hhsc.state.tx.us</a>&lt;br&gt;Phone: 512-419-2038</td>
</tr>
<tr>
<td><strong>3. Tara Butler, MLT(ASCP)</strong>&lt;br&gt;Chemistry&lt;br&gt;Lecture and Rotation: Chemistry II</td>
<td>Email: <a href="mailto:Tara.butler@hhsc.state.tx.us">Tara.butler@hhsc.state.tx.us</a>&lt;br&gt;Phone: 512-419-2036</td>
</tr>
<tr>
<td><strong>4. Cole, Marie, MT(ASCP), SH(ASCP)CM</strong>&lt;br&gt;Supervisor – Hematology&lt;br&gt;Lecture and Rotation: Hematology/Coag</td>
<td>Email: <a href="mailto:Esther.cole@hhsc.state.tx.us">Esther.cole@hhsc.state.tx.us</a>&lt;br&gt;Phone: 512-419-2608</td>
</tr>
<tr>
<td><strong>5. Carrie Dillon, BS, CLS (ASCP)</strong>&lt;br&gt;Supervisor- Accessioning/Immunohematology&lt;br&gt;Lecture and Rotation: Immunohematology</td>
<td>Email: <a href="mailto:Carried.dillon@hhsc.state.tx.us">Carried.dillon@hhsc.state.tx.us</a>&lt;br&gt;Phone: 512-419-2029</td>
</tr>
<tr>
<td><strong>6. Anupama Gadde , MLS (ASCP)</strong>&lt;br&gt;Supervisor – Microbiology/Serology&lt;br&gt;Lecture and Rotation: Microbiology</td>
<td>Email: <a href="mailto:Anupama.gadde@hhsc.state.tx.us">Anupama.gadde@hhsc.state.tx.us</a>&lt;br&gt;Phone: 512-419-2028</td>
</tr>
<tr>
<td><strong>7. Joe Garcia, BS, MT (ASCP)</strong>&lt;br&gt;Supervisor – Chemistry/Urinalysis/Toxicology&lt;br&gt;Lecture and Rotation: Chem I+II/UA/Tox</td>
<td>Email: <a href="mailto:Josel.garcia@hhsc.state.tx.us">Josel.garcia@hhsc.state.tx.us</a>&lt;br&gt;Phone: 512-419-2031</td>
</tr>
<tr>
<td><strong>8. Silvia Ray, BS, MLS (ASCP)</strong>&lt;br&gt;Microbiology/Serology&lt;br&gt;Lecture: Serology and Molecular</td>
<td>Email: <a href="mailto:Silvia.garcia2@hhsc.state.tx.us">Silvia.garcia2@hhsc.state.tx.us</a>&lt;br&gt;Phone: 512-419-2028</td>
</tr>
<tr>
<td><strong>9. Margaret Schulenberg, BS, MT (ASCP)</strong>&lt;br&gt;Chemistry/Urinalysis&lt;br&gt;Lecture: Chemistry I + II</td>
<td>Email: <a href="mailto:Margaret.schulenberg@hhsc.state.tx.us">Margaret.schulenberg@hhsc.state.tx.us</a>&lt;br&gt;Phone: 512-419-2036</td>
</tr>
<tr>
<td><strong>10. Lynn Six, BS, MLS (ASCP)</strong>&lt;br&gt;Chemistry/Urinalysis&lt;br&gt;Lecture: Urinalysis/Body Fluids and Chem I</td>
<td>Email: <a href="mailto:Lynnita.six@hhsc.state.tx.us">Lynnita.six@hhsc.state.tx.us</a>&lt;br&gt;Phone: 512-419-2036</td>
</tr>
</tbody>
</table>

---

## Program Pathologist and Affiliate Contacts

1. Susan Pacinda, M.D., ASH Consulting Pathologist
2. Karla Snell, BS, MT (ASCP), Automation Coordinator
3. Cynthia Crouch, MPA, Training Coordinator, Laboratory Services Section DSHS
4. Wendy Sivilay, BS, MLS(ASCP)CM, Laboratory Manager, Dell Seton Medical Center
5. Lorraine Fernandez, QA and Education Coordinator, Clinical Pathology Laboratories
6. Juan J. Martinez, B.S., CLS (ASCP), Laboratory Training Coordinator, We Are Blood
7. Micah Jackman – University of Texas at Austin, Academic Advisor
Appendix A
Signature Page

Name (PRINT) ____________________________________________

Instructions: After thorough review of the MLS Student Handbook please sign and date each of the following lines. After signing submit the form to the Program Director or designee.

---

Release of Information

I give Austin State Hospital Program in Medical Laboratory Science consent to release information

- about my performance as a student in this program to future employers and to allow my employer to complete a Graduate Survey.
- to academic institutions for those students who are enrolled in a 3+1 degree.
- to the National Accrediting Agency for Clinical Laboratory Science (NAACLS) as requested
- to the American Society for Clinical Pathology Board of Certification as requested

Signed: ___________________________  Date: ________________

---

Essential Functions

I have read and understood the Essential Functions and believe, to the best of my ability, I can meet them with or without reasonable accommodations.

Signed: ___________________________  Date: ________________

---

Student Handbook Statement of Understanding

I have read the Medical Laboratory Sciences Student Handbook and have had an opportunity to have my questions answered. I agree to abide by the rules and policies as set forth in the Student Handbook.

Signed: ___________________________  Date: ________________

---

Confidentiality Statement

As a student enrolled in the Austin State Hospital Program in Medical Laboratory Science, I am cognizant of my responsibilities to maintain the confidentiality of Austin State Hospital patients, research designs and protocols. I hold inviolate the confidence (trust) placed in me by patient and physician.

Signed: ___________________________  Date: ________________
This page intentionally left blank.
Appendix B
Honor Code

Name (PRINT) ______________________________

Any form of dishonesty is a serious offense in an academic setting. It is imperative that every student understands the standards of academic honesty because lack of awareness will not be excused for dishonest conduct.

Academic dishonesty includes but is not limited to:

1. **Cheating on examinations, practicals or tests.** Use of cheat sheets, copying exams, use of reference material while taking an exam and sharing information about exams or practicals with other students will not be tolerated.

2. **Submission of work as one’s own that has been prepared by another person.**

3. ** Forgery or falsification of academic documents.**

4. **Knowledge of another student violating the Honor Code without reporting it to the Program Director or Medical Director.**

If a student has been found in violation of the Honor Code it may be cause for dismissal as outlined in the MLS Student Training Program Handbook. Any disciplinary action due to Honor Code violations can be appealed to the Program Director in writing. The Program Director will reply within five working days.

My signature below acknowledges that I agree to abide to the provisions of the Austin State Hospital Program in Medical Laboratory Science Honor Code.

Signed: ________________________________ Date: __________________
